

# PHENIX WEEKLY PLANNING



10/13/2011  
Don Lynch

## This Week

- RPC1 North Installation continues, QA testing
- Complete CM west side hanging platform installation
- Survey requirements reviewed with Frank Karl: VTX, FVTX, RPC1 and BP
- Continue installing MuTr station 2 & 3 North work platforms in MMN
- Design for MMS station 2/3 work platforms
- Continue assembly & QA of RPC1S octants at RPC factory
- VTX repairs/upgrades/reassembly continues
- FVTX assembly continues
- Design BP protection for south station 1 and Inside BBC North
- Install BBC North
- MPC North troubleshooting
- Continue design and procurement for RPC3 shielding, Hodoscope, AH Crane upgrade & repairs, and R134A shed

## Next Week

- RPC1 North Installation continues, QA testing
- RPC1 survey
- Continue installing MuTr station 2 & 3 North work platforms in MMN
- Design for MMS station 2/3 work platforms
- Continue assembly & QA of RPC1S octants at RPC factory
- VTX repairs/upgrades/reassembly continues
- FVTX assembly continues
- Design BP protection for south station 1 and Inside BBC North
- Install BBC North
- MPC North troubleshooting
- Continue design and procurement for RPC3 shielding, Hodoscope, AH Crane upgrade & repairs, and R134A shed

## TECHNICAL SUPPORT ZONE

- Remaining Work Permits needed: End of Shutdown WP 10/1
- South BP protection 10/24
- Reinstall BBC North 10/10
- MPC N troubleshooting 10/10
- CM alignment stops 11/14
- Reinstall BBC South 11/14
- MPC S troubleshooting 11/21
- Upgrade AH crane 10/15-11/30
- DC/PC1 East/West troubleshooting as required 10/3-11/15
- Undefined detector subsystem maintenance and repairs 7/25-11/7
- RPC3 Shielding 11/21
- RPC Hodoscope 11/21
- Prep for EC roll in, reinstall MMS lampshade 11/28-12/2
- Roll in EC 12/5
- Prep IR for run 12/5-12/9
- VTX, FVTX and RPC1 Services and QA tests (including 4 new racks) 9/16-11/30
- BP Survey 10/17-12/12
- EC prep & roll-in, IR run prep, Pink/Blue/White sheets 12/5-12/23
- New and upgraded full detector commissioning 9/15-12/31
- Run 12 cooldown 1/1/2012

- VTX pixel/strip pixel repairs 10/14
- VTX re-assembly 10/21
- VTX QA tests 10/28
- VTX (w/o FVTX) survey 11/4
- FVTX procurement & Assembly 10/10
- FVTX QA tests 10/17
- VTX+FVTX final installation to start 10/31
- Final VTX+FVTX Integration & Survey in Chem Lab 11/4
- VTX+FVTX move to 1008 11/7
  
- VTX/FVTX Installation at 1008
  - Build 2 FVTX racks 7/1-10/31
  - Install VTX/FTX, Re-connect VTX services, Install FVTX services, survey and QA tests 11/7-11/23
  - VTX/FVTX Commissioning & Contingency 11/23-12/31
  - Chiller leak/contamination improvements 10/1

# VTX Status

- Stripixel:
  - Waiting for barrels to be reassembled, then need to re-test, 3-4 days
  - FEM testing at ORNL
- Pixels
  - Additional work on plugging west side leaks this week
  - SPIRO boards testing complete
  - Still studying bonding issue at SBU and BNL
    - Will try and re-bond part of 1 ladder this week (instrumentation)
  - No changes to ladders on West Side, Discussion of options for east side taking place
  - Replacement ladder to arrive 14-Oct-2011.

# FVTX Milestones, Status



## ROC Boards

- First 6 ROC boards ship to BNL
- Second 6 ROC boards received shipped to BNL
- Third 6 ROC boards shipped
- Last boards expected

Sept 16

Oct 5

Oct 11

Oct 17?

## Cage Assembly

- Assembly of first  $\frac{1}{2}$  cage
- Assemble second  $\frac{1}{2}$  cage
- Send first two  $\frac{1}{2}$  cages to Chemistry
- Assemble remaining two  $\frac{1}{2}$  cages and test
- Send last two  $\frac{1}{2}$  cages to Chemistry

COMPLETED

Oct. 6 – Oct. 13?

Next week?

Oct 14 – Oct. 21?

Last week of October?

## Some Questions

- Can we get expected schedule for cable routings (some more detail)?
- When can we test fit an empty cage into VTX again (with cables dressed)? Would like to do before 4<sup>th</sup> cage assembly (then a cage is no longer available)
- Does it make sense to ship out FEMs now (need crate, rack, and power)
- Need to schedule pre-survey of our cages with disks
- What will cabling plans be in IR? We provide instructions or we come and make connections ourselves?
- Where physically should we plan to ground our disks, cages

## MuTr North Station 1 work

- Clean/install new parts and upgrades (MuTr (3 weeks, At RPC Factory) Done
- Re-install chambers and FEE plates (1 week) Done
- Re-install north section of bridge Done
- Re-cable, re-hose and test (3 weeks) in progress
- Move CM north 10/21 -24

## MuTr Station 2 N (from sta 1 side) terminators and Dry air header mod

- Station 2 Maintenance/upgrade through access opened by station 1 removal Done

## MuTr North & South Station 2 & 3 Re-cap clamps

(No internal work platforms to upper octants)

- Install new capacitor clamps and terminators in lower octants (In Progress)  
7/25-12/31
- Re-install MMS east vertical lampshade 11/28



## RPC Tasks

- Assembly at QA tests at RPC Factory 10/17
- Build 1 new rack, upgrade existing RPC1 prototype rack Done
- Install north RPC1 (including both racks & services) 10/14
- HV Tests, gas system calibration 9/23-10/21
- Move Station 1 work platforms to south station 1 10/28
- Install south RPC1 10/31-11/23
- Remove all scaffolding and hanging platforms 12/5
- RPC1 north and south commissioning 9/6-12/5
- RPC3 HV Distribution modifications, gas distribution modifications, PS calibration HV and services testing 7/1-12/5

TECHNICAL SUPPORT ZONE

## RPC1 readout work before North close-up - Support needed and schedule

RPC Work Item	Estimated RPC item work duration	PHENIX Support needed for RPC to start work on item	Aimed-at start of RPC item work
* Verify communication with FEE rack	1 day	<ul style="list-style-type: none"> <li>* crane/manlift electronics board boxes to central magnet bridge</li> <li>* install clockmaster boards</li> <li>* install MegaPaC LV power supplies on RPC1 North if on South rack</li> <li>* power on central magnet bridge</li> <li>* 3 fibers and 1 ethernet cable on central magnet bridge</li> </ul>	If possible before or on 10/19
* RPC1 North full system readout test	1 week	* Finish RPC1 North cable routing	All RPC people gone 10/26-10/30 (ML gone 10/20-10/30)

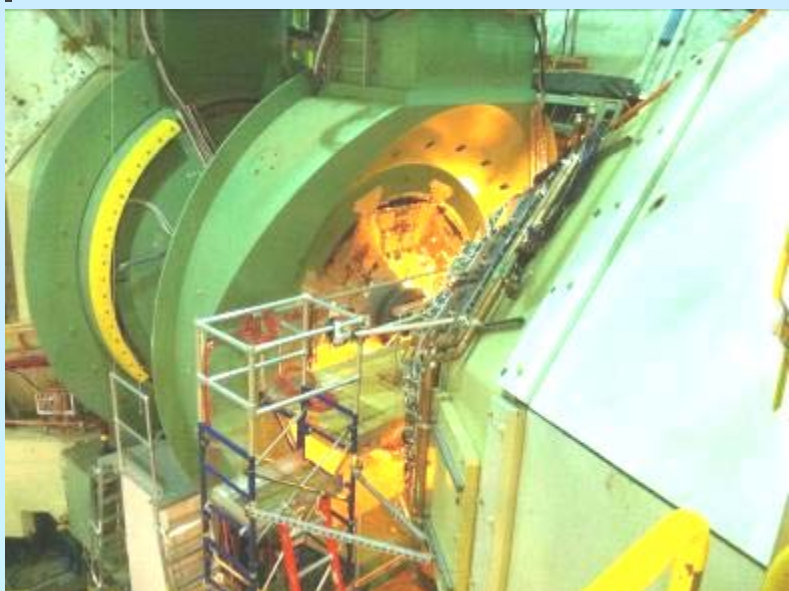
=> Would be great if north side would remain **open until 11/2**, optimally until 11/7 or longer

- RPC1
  - HV Cables *Installation in progress*
  - Signal cables *Installation in progress*
  - LV cables *Installation in progress*
  - Racks
    - Assembly *Done*
    - Install on bridge *Done*
- RPC3 additional HV boxes *Ready for installation*
- FVTX
  - Bias cables *pigtails are Here; extensions due next week*
  - LV cables *Wedge cables are here, dist to mapper due next week ROC LV Cables to be terminated in-house*
  - Fiber *Control & trunk fibers and patch bays ready*
  - Mapper boards *ready to install*
  - CMT3 and CMT4 FVTX racks
    - Assembly *10/31*
    - Install on bridge *11/4*
- VTX Modify thermocouple connections *Design & procurement done, programming needed, ready for installation*
- PC Board Designs
  - PbSc terminator board production *here*
  - New LV Dist front panels *here*
  - GL1 6X1 Multiplexer assemblies *design finished, quotes are in*
  - New MPC junction board *prototype in layout phase*
  - Dual SVX board for E. Kistenev *next in line*
- West carriage ADAM system performance upgrade *2 new Modbus servers under test in 1008*
- LeCroy HV control retrofit testing *Still Waiting for doc. from Debrecen Inst*

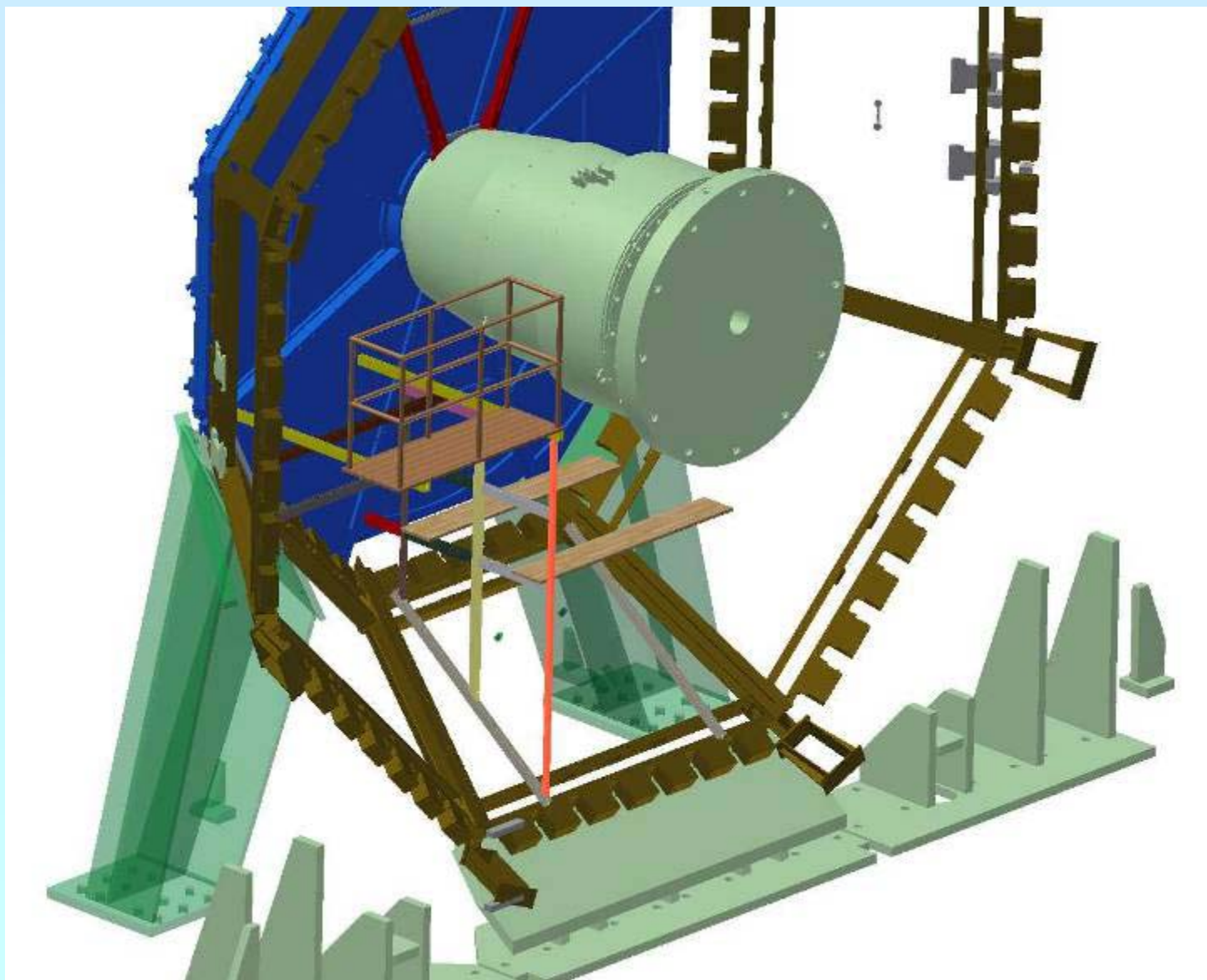
TECHNICAL SUPPORT NOTES

## Miscellaneous Gas & Cooling System Tasks

- Redo bypass line on VTX/FVTX spare chiller to remove kink 7/1-12/31
- Move RPC R134A tanks nearer to GMH, install cover, insulated lines 7/1-12/31
- Replace MuTr flowmeters (north and south) 7/1-12/33  
north done
- RPC  $\frac{1}{4}$ " copper line from RPC rack to CM 7/1-12/31



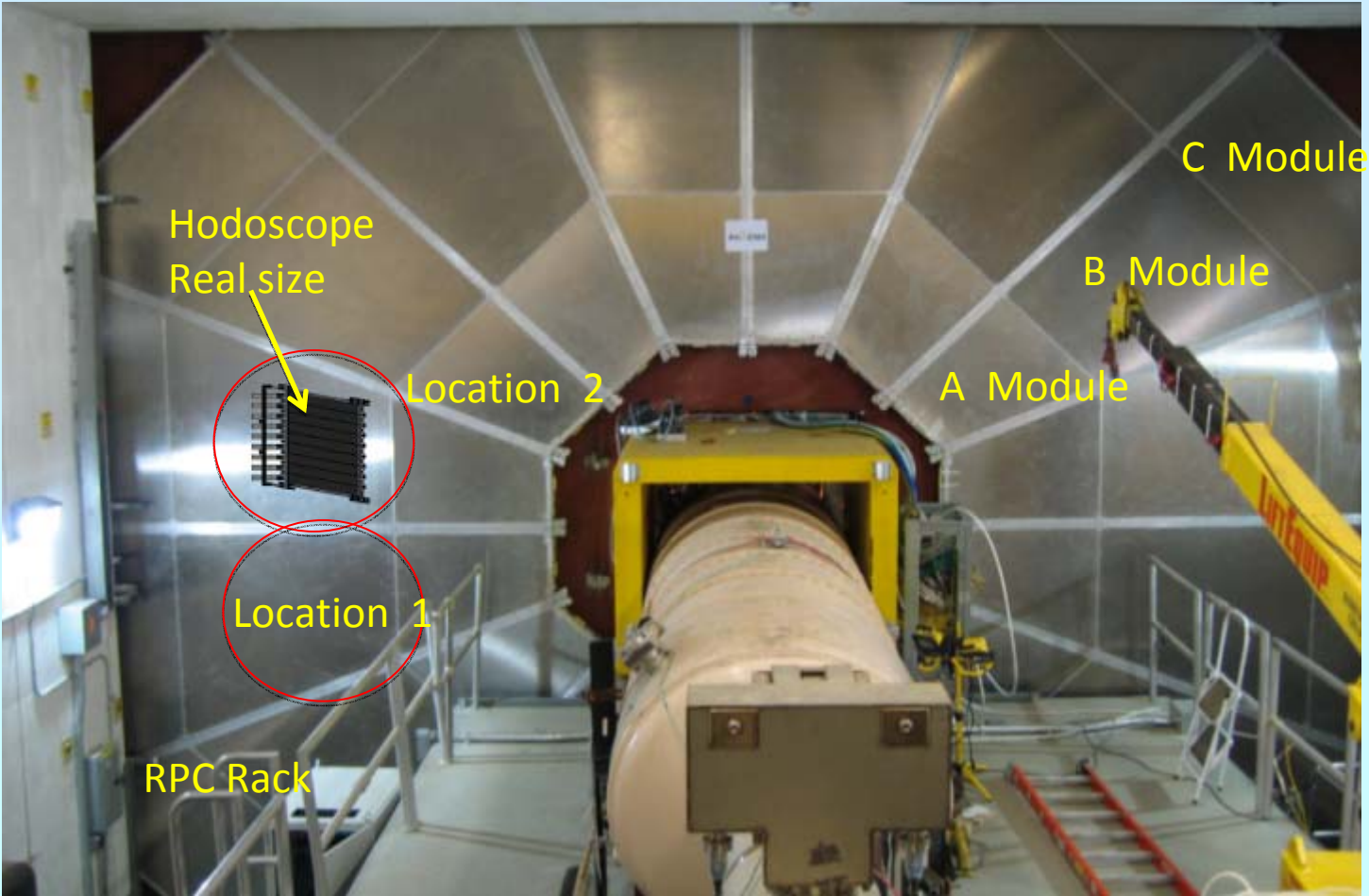




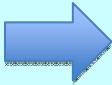
Station 2/3  
Access

# RPC Hodoscope

TECHNICAL SUPPORT



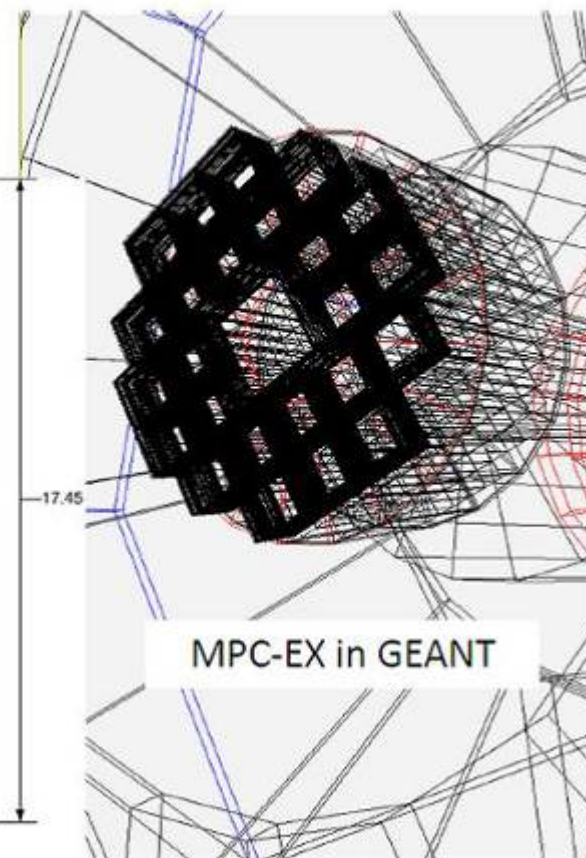
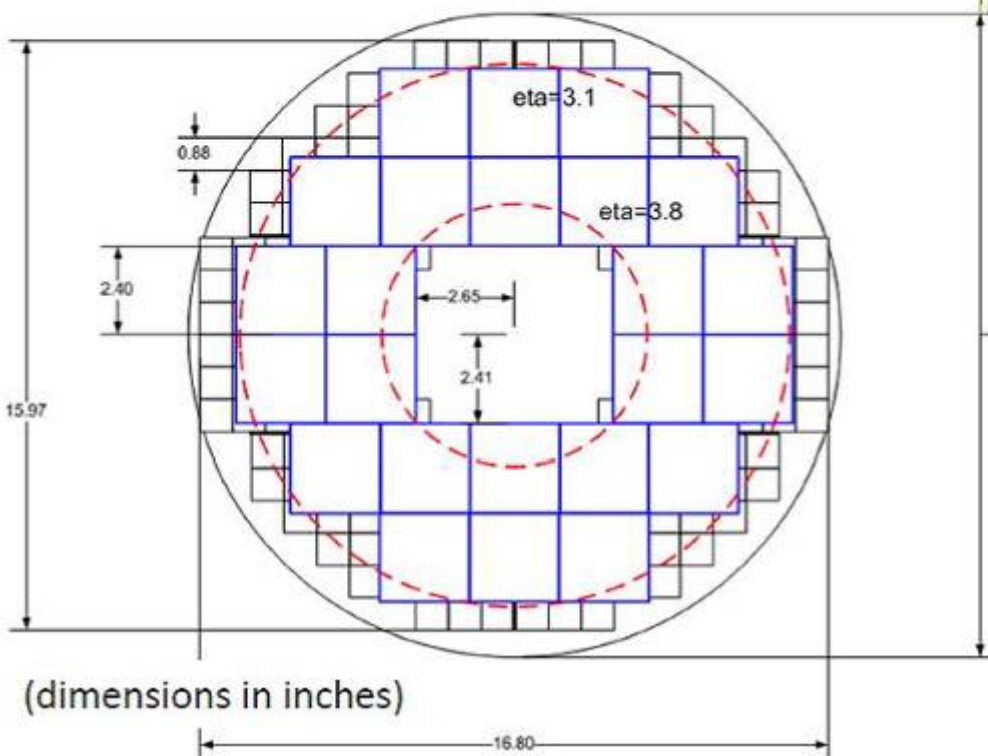
Close to RPC3 electronics rack  
Less Beam background region



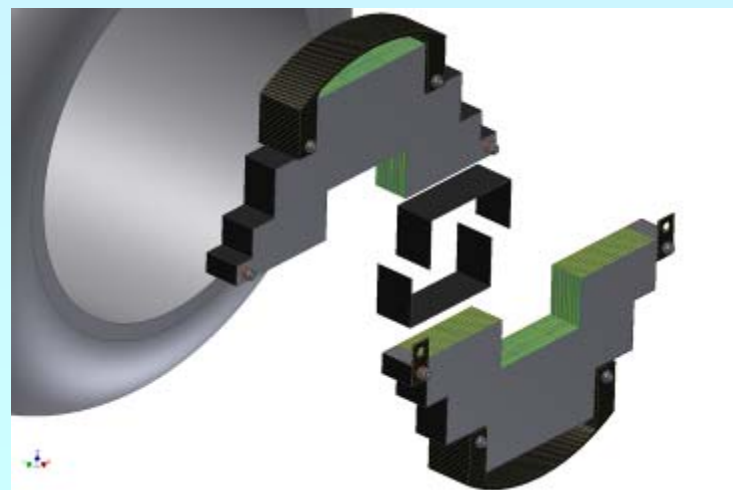
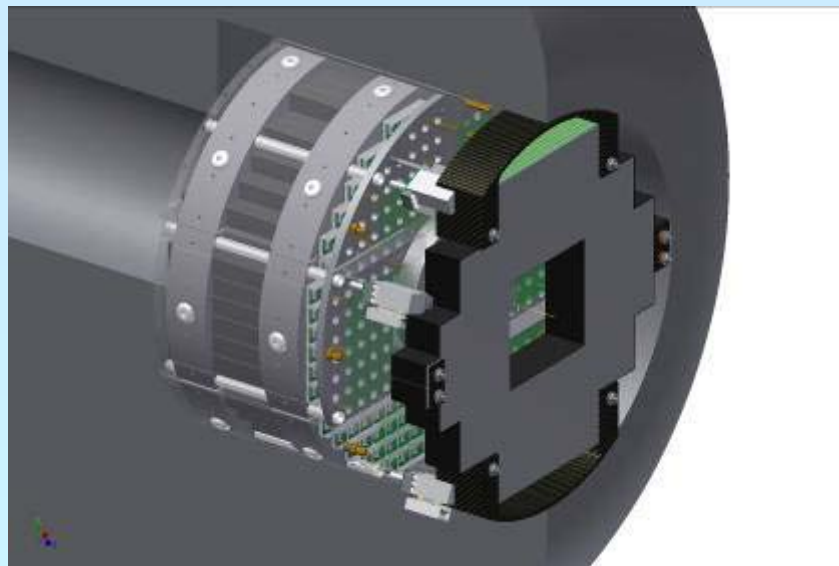
Location 1 or 2 would be good position

# Design of the MPC-EX

Detector is designed around 6.2cm x 6.2cm modules (Si pad or strip detectors) separated by 2mm tungsten plates.







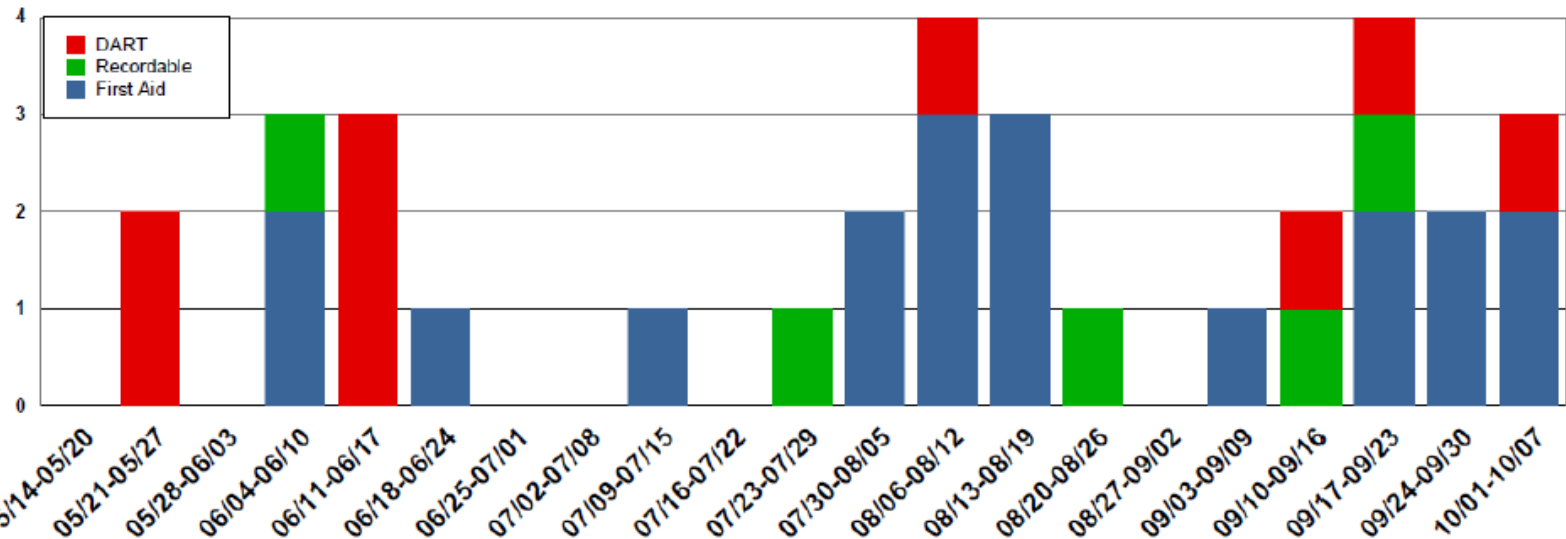
# Infrastructure Issues

TECHNICAL SUPPORT NO. 1

- Roof leaks in utility bathroom at northwest corner behind tech offices, over door between rack room and assembly hall, over door between control room and elect. ass'y room, southeast corner of IR and laser room.
- Flooding in AH/ Driveway heaving
- Electronics test/assembly room-to-parking lot door (does not open/close/lock properly - needs to be replaced)
- Temperature in utility hall (where new air compressor is installed) is exceedingly high (transformer cases as high as 135 F)



**Injuries Per Week**  
As of 10/7/2011



**Injury Status:**

FY12: DART – 1, TRC – 1, First Aid – 2

FY11 YTD: DART – 27, TRC – 43, First Aid – 43

**Recent Injuries**

10/05/11	First Aid	A subcontractor struck his thumb with a hammer. He received first aid and returned to work.
10/05/11	First Aid	An employee struck head against object and received a laceration. At the clinic first aid was given.
10/03/11	DOE reportable DART	On 10/03/11, an employee hurt lower back while lifting a cover off a vehicle monitor. The employee was given first aid at the Clinic and returned to work. Update 10/06/11: employee is losing time.

## Recent Events

10/06/11	Non-reportable	A lawnmower was turning left at the corner and was signaling as per a witness interviewed by BNL Police. A private vehicle attempted to pass the lawnmower causing a collision. The private vehicle had significant damage, and the lawnmower had very minor damage. There were no injuries.
10/05/11	Non-reportable	While weed-whacking at the rear of Building 490, debris hit a window. The window cracked but was not shattered. There were no injuries.
10/04/11	Non-reportable	As a private vehicle was parking near the front door of the Linac, Building 930, it jumped the curb at low speed. A small shed attached to the building which contains a vacuum pump was impacted. There was minor damage to the corner of the shed and the front bumper of the car. There were no injuries. No air bags were deployed, and there were no releases to the environment.
10/03/11	SC-4	After a Building 480 occupant heard a noise, an investigation that followed showed that Freon 22 was being released from an air handling chiller compressor to the atmosphere. Environmental Protection Division reports that the amount released exceeded a NY State limit and requires submission of a special report to the state other than the routine periodic report. BNL Fire Rescue was called to sample the building atmosphere which showed no measurable quantity of Freon 22 in the building air. There were no injuries.
10/03/11	Non-reportable	Occupants of an office in Building 463 noticed a light ballast sparking when a switch turned on. The switch was turned off and Fire/Rescue was called to ensure no unsafe conditions so repairs can proceed. Area under control and light will be repaired.
10/03/11	Non-reportable	During the BNL Historical Tour an employee from was impacted by a deer near the road by the HFBR. The employee went to Clinic and received First Aid to the ankle.
10/03/11	Non-reportable	Lights in the construction area of building 480 went out and work area was paused while the cause was investigated. There was a burning smell in the vicinity of an AC unit in room 1-108. The upstream breaker feeding the equipment and temporary power to the construction area was found tripped. A cut red lock was lying near a toolbox in the vicinity for a fairly long time per the RSM for the area. The unit was operational until at least Friday of last week and the last time it was worked on was approximately 2 weeks ago. There is no indication that the cut lock should have been in place to protect equipment or for safety, nor that it was removed inappropriately, or that there was an unintentional release of energy as a result of the lock not being in place. An investigation will continue to identify the cause of unit failure and the origin of the lock, however, at this time we are not declaring an ORPS or SCBNL Management Concern.

## Where To Find PHENIX Engineering Info

This day in history:

1792 White house cornerstone laid

Tomorrow in history:

1947 Chuck Yeager breaks the sound barrier

Links for the weekly planning meeting slides, archives of past meeting slides, long term planning, pictures, videos and other technical info can be found on the PHENIX Engineering web site:

[http://www.phenix.bnl.gov/WWW/INTEGRATION/ME&Integration/DRL\\_SSint-page.htm](http://www.phenix.bnl.gov/WWW/INTEGRATION/ME&Integration/DRL_SSint-page.htm)

